

CLAIMS

What is claimed is:

1. An implantable electrode adapted for placement over a relatively flat or oval nerve bundle that remains attached to fascia tissue, comprising:
 - a "C"-shaped non-conductive carrier adapted to fit over the nerve bundle while it remains attached to fascia tissue, the C-shaped portion having a distal portion and a proximal portion that are relatively flat, providing surfaces which are adapted to lie against the fascia tissue to which the nerve bundle is attached;
 - at least one electrode contact carried on an inside surface of the "C"-shaped carrier; and
 - at least one wire connected to the electrode contact;
 - wherein the at least one wire exits the "C"-shaped carrier along a proximal portion thereof; and
 - wherein the at least one wire is carried in an insulating lead.
2. The electrode of Claim 1 wherein the relatively flat proximal portion of the electrode includes at least one suture hole through which a suture stitch may be placed to connect the proximal portion of the electrode to the surrounding fascia tissue.
3. The electrode of Claim 2 wherein the relatively flat distal portion of the electrode includes a suture hole through which a suture stitch may be placed to connect the distal portion of the electrode to the surrounding fascia tissue.

4. The electrode of Claim 1 wherein there are at least two parallel spaced-apart electrode contacts carried on the inside surface of the "C"-shaped carrier.

5. The electrode of Claim 3 wherein there are at least three parallel spaced-apart electrode contacts carried on the inside surface of the "C"-shaped carrier.

6. The electrode of Claim 5 wherein two of the three electrode contacts are electrically connected together.

7. The electrode of Claim 6 wherein the two electrode contacts that are electrically connected together reside on the outside of a center electrode contact.

8. The electrode of Claim 5 wherein the at least three parallel spaced-apart electrode contacts are embedded within the carrier, with one surface of the electrode contacts being exposed on the inside surface of the "C"-shaped carrier.

9. A curved paddle electrode (10) adapted to fit over a nerve bundle (30) without dislodging the nerve bundle from fascia tissue (32) to which one side of the nerve bundle is connected, comprising:

a non-conductive carrier (16) adapted to fit over the nerve bundle, the non-conductive carrier having a distal portion and a proximal portion that are substantially flat;

at least three parallel spaced-apart electrode contact strips (12, 13, 14) carried on the non-conductive carrier (16), wherein two of the three electrode contact strips are electrically connected to each other;

at least one wire (23a) that connects to the two spaced-apart electrode contacts that are electrically connected to each other; and

at least one wire (22a) that connects to the electrode contact not connected to any other electrode contacts;

wherein the non-conductive carrier (16) is adapted to fit over the nerve bundle (30) so that the spaced-apart electrode contact strips are positioned substantially transverse to the nerve bundle so as to make physical contact therewith.

10. The electrode of Claim 9 wherein the electrode contact strip (13) that is not electrically connected to another electrode contact strip is in the middle of the two electrode contact strips (12, 14) that are electrically connected to each other.

11. The electrode of Claim 6 further including means for suturing the electrode to the fascia tissue.

12. The electrode of Claim 11 wherein the means for suturing the electrode to the fascia tissue comprises at least one suture hole in at least one of the proximal or distal flat portions of the carrier.

13. The electrode of Claim 11 wherein the means for suturing the electrode to the fascia tissue comprises a puncturable material within the proximal and distal flat portions of the carrier that may be punctured or pierced with a suturing instrument.

14. The electrode of Claim 9 wherein the combination of the non-conductive carrier and the at least three spaced-apart electrode contact strips

render the electrode malleable so that it can be bent and formed to a desired shape.

15. A kit of curved paddle electrodes adapted to be used with a neurostimulator, said kit comprising:

a plurality of electrodes of different sizes, wherein each electrode within the kit comprises:

a "C"-shaped non-conductive carrier adapted to fit over a nerve bundle while it remains attached to fascia tissue, the C-shaped portion having a height H, a width W, and a length L, and further having a distal portion and a proximal portion that are relatively flat, providing surfaces which are adapted to lie against fascia tissue to which the nerve bundle is attached,

at least one electrode contact carried on an inside surface of the "C"-shaped carrier, and

at least one wire connected to the electrode contact,

wherein the at least one wire exits the "C"-shaped carrier along a proximal portion thereof, and

wherein the at least one wire is carried in an insulating lead;

and

wherein the different sizes of the plurality of electrodes are determined by different heights H and widths W;

whereby an electrode may be selected from the kit of electrodes that is adapted to best fit a given nerve bundle over which it is to be placed without undue pressure that might cause constriction of the nerve bundle.